

CLAIM LISTING

Claim 1. (Currently Amended): A biodegradable implant comprising:

a rigid matrix component containing at least one biodegradable polymer or copolymer,
and

a plasticizer dispersed within the rigid matrix to produce an flexible implant that is flexible and rigid prior to insertion into an organ system,

which plasticizer substantially exits from the implant after coming into contact with tissue fluids of an organ system in such a manner that

the bending resistance of the implant prior to the insertion of the implant into the organ system is substantially lower than after its insertion into the organ system.

Claim 2 (Currently Amended): A biodegradable implant comprising:

a rigid matrix component containing at least one biodegradable polymer or copolymer,
and

a plasticizer dispersed within the rigid matrix to produce an flexible implant that is flexible and rigid prior to insertion into an organ system,

which plasticizer substantially comprises N-methyl-2-pyrrolidone (NMP),

and which plasticizer substantially exits from the implant after coming into contact with tissue fluids of an organ system in such a manner that

the bending resistance of the implant prior to the insertion of the implant into an organ system is substantially lower than after its insertion into the organ system.

Claim 3. (Original): An implant as claimed in claim 1, wherein the matrix component comprises at least one of the following polymers or copolymers that is selected from the following group: polyglycolide, polylactides, polycaprolactones, polytrimethylenecarbonates, polyhydroxybutyrates, polyhydroxyvalerates, polydioxanones, polyorthoesters, polycarbonates, polytyrosinecarbonates, polyorthocarbonates, polyalkylene oxalates, polyalkylene succinates, poly(malic acid), poly(maleic anhydride), polypeptides, polydepsipeptides, polyvinylalcohol, polyesteramides, polyamides, polyanhydrides, polyurethanes, polyphosphazenes, polycyanoacrylates, polyfumarates, poly(amino acids), modified polysaccharides, modified proteins and copolymers thereof.

Claim 4 (Original): An implant as claimed in claim 1, wherein at least the surface of the implant is porous.

Claim 5 (Original): An implant as claimed in claim 1, wherein active agents, such as antibiotics, pharmaceutical products, growth hormones, styptic agents, chemotherapy agents, are arranged in the implant.

Claim 6 (Original): An implant as claimed in claim 1, wherein the plasticizer is added to the matrix material at the latest at the forming stage of the implant.

Claim 7 (Original): An implant as claimed in claim 1, wherein the plasticizer is added to the implant just before the implant is inserted into the organ system.

Claim 8 (Original): An implant as claimed in claim 1, wherein the implant is a membrane used in guided tissue regeneration.

Claim 9 (Currently Amended): A method for manufacturing a biodegradable implant comprising the steps of:

selecting at least one biodegradable polymer or copolymer of a rigid matrix component of the implant,

adding a plasticizer to the matrix component to produce an flexible implant that is flexible and rigid prior to insertion into an organ system,

which plasticizer is dispersed within the rigid matrix and substantially exits from the implant after coming into contact with tissue fluids of the organ system in such a manner that the rigidity of the implant increases substantially after the implant is inserted into the ~~the~~ organ system, and

forming the flexible implant from the mixture of said matrix component and plasticizer.

Claim 10 (Currently Amended): A method for manufacturing a biodegradable implant comprising the steps of:

selecting at least one biodegradable polymer or copolymer of a rigid matrix component of the implant,

forming the implant from said matrix component, and

adding a plasticizer to the matrix component to produce an flexible implant that is flexible and rigid prior to insertion into an organ system,

which plasticizer is dispersed within the rigid matrix and substantially exits from the implant after coming into contact with tissue fluids of the organ system in such a manner that the rigidity of the implant increases substantially after the implant is inserted into the [[an]] organ system.

Claim 11 (Original): A method as claimed in claim 9, wherein the plasticizer comprises N-methyl-2-pyrrolidone (NMP).

Claim 12 (Original): A method as claimed in claim 9, wherein the plasticizer is added to the implant just before the implant is inserted into the organ system.

Claim 13 (Original): A method as claimed in claim 9, wherein the matrix component comprises at least one of the following polymers or copolymers that is selected from the following group: polyglycolide, polylactides, polycaprolactones, polytrimethylenecarbonates, polyhydroxybutyrates, polyhydroxyvalerates, polydioxanones, polyorthoesters, polycarbonates, polytyrosinecarbonates, polyorthocarbonates, polyalkylene oxalates, polyalkylene succinates, poly(malic acid), poly(maleic anhydride), polypeptides, polydepsipeptides, polyvinylalcohol, polyesteramides, polyamides, polyanhydrides, polyurethanes, polyphosphazenes, polycyanoacrylates, polyfumarates, poly(amino acids), modified polysaccharides, modified proteins and copolymers thereof.

Claim 14. (Original): A method as claimed in claim 9, wherein the implant is porous.

Claim 15. (Original): A method as claimed in claim 9, wherein active agents are added to the implant.

Claim 16. (Original): A method as claimed in claim 15, wherein the active agents are first mixed into the plasticizer and then added together with the plasticizer to the matrix component.

Claim 17. (Original): A method as claimed in claim 9, wherein the implant is a membrane used in guided tissue regeneration.